

# **Testing and Training: A National Partnership**

**James F. O'Bryon**  
**Deputy Director**  
**Operational Test and Evaluation**

**2nd Annual Symposium and Exhibition**

**August 17-19, 1999**

Office of the Secretary of Defense  
OSD/DOTE/LFT  
1700 Defense Pentagon, Room 1C730  
Washington, DC 20301-1700  
v: (703) 614-5408 f: (703) 697-1404  
[jobryon@dote.osd.mil](mailto:jobryon@dote.osd.mil)



# MAJOR DOT&E INITIATIVES

- Sec Def Themes
  - Early involvement
  - Use models and simulations effectively
  - Combine tests when possible
  - Combine tests and training when possible
  - Address ACTDs
- Testing for understanding/learning
- Partnerships with industry
- Joint Vision 2010 as a context for evaluation
- CINC partnerships and joint experimentation in support of the CINCs



# LFT&E

SECRETARY of DEFENSE  
Honorable William S. Cohen

DIRECTOR, OT&E  
Honorable Philip E. Coyle III

LIVE FIRE TEST & EVALUATION  
James F. O'Bryon

Mr. Richard Carter

Mr. Leonard Daniels

Ms. Hortensia Day

Dr. Jay Gould

Mr. Robert Jordan

Mr. Thomas Julian

Dr. Frank Mello

Ms. Sandy Gibson-Posey

Mr. Rick Seymour

Ms. Amy Spraitzer

Mr. Mark Theroff

Mr. Tim Wise

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Washington, DC 20301-1700



# LFT&E OBJECTIVES

- Provide decision-makers with information on potential user casualties, vulnerabilities, and lethality
- Ensure testing is done under realistic combat conditions
- Allow design deficiencies to be corrected before progressing beyond Low Rate Initial Production (LRIP)
- Assess battle damage repair capabilities and issues



# LFT&T PROGRAM OBJECTIVE

Exploit the exchange of technology development initiatives and uses between the live fire test and training communities that will improve our ability to better serve our ultimate customer--*the warfighter.*



# LFT&T CONGRESSIONAL SUPPORT

- FY97: \$3M

Appropriations Bill: “The Committee directed that Live Fire Test and Evaluation develop a program that will explore, select, and implement alternative uses of simulation and synthetic environment technologies that are being used for education and training for implementation by the live fire test community.”

- FY98: \$4M

- FY99: \$5M



**Congress of the United States**

**House of Representatives**

**Washington, DC 20515**

**August 9, 1999**

The Honorable Bill Cohen  
Secretary of Defense  
1000 Defense Pentagon  
Washington, D.C. 20301-1000

Dear Mr. Secretary,

We want to bring to your attention the Live Fire Test and Training Initiative (LFT&TI) program, and ask that you provide funding for this program in DoD's FY 2001 budget request. As you know, the LFT&TI program complements live fire test and evaluation opportunities with modeling and simulation technology to more thoroughly test weapons and weapon platforms and thereby improve the readiness of our armed forces.

This program began as a Congressional directive in the FY 1997 Defense Appropriations Bill. Congress subsequently increased funding for this program in FY 1998 and FY 1999, given the impressive results of the program. As an example, LFT&TI's training and testing of the Combat Trauma Patient Simulator resulted in a more realistic trainer which enforces learning that will save lives. Similarly, their participation in the Small Arms Fire project, already resulted in over \$2 million in testing and design savings.

Simulation has proven itself to be an integral part of weapons testing. LFT&TI's use of leading technologies and partnerships between the armed services, industry, and government saves lives and taxpayer dollars. Therefore, we encourage you to add this program into your next budget submission to Congress. The Live Fire Test and Training Initiative, falls under program element 0605131D8Z in the Defense Budget.

Thank you for your assistance with this important matter.

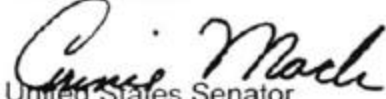
Sincerely,

Bob Graham



United States Senator

Connie Mack



United States Senator

Corrine Brown



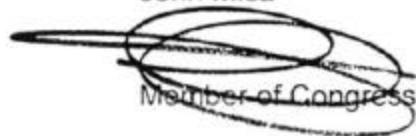
Member of Congress

Bill McCollum



Member of Congress

John Mica



Member of Congress

# **SIGNIFICANT AREAS OF TECHNOLOGY TO DATE**

- Human Performance in LFT&E
- More Realistic Simulations using Live Fire Data
- Using Simulations to support Testing Community
- Battle Damage Assessment and Repair
- Augmented Reality Applications to Shipboard Damage Control
- Directed Energy Weapons





# **PROGRAM OVERSIGHT**

## **LFT&T Senior Advisory Group (SAG)**

**Deputy Director, OT&E for LFT&E (Chair)**

Mr. Jim O'Bryon

**Commanding General, STRICOM**

BGen. William Bond, US Army

**Commanding Officer, NAWCTSD**

CAPT Jay Hixson, US Navy

**Commander, AFAMS**

Col. Rick Ales, US Air Force

**Director, Marine Corps Programs, NAWCTSD**

Col. Joseph Buranosky, US Marine Corps



# CURRENT STATUS

- FY 99 projects underway
- FY00 solicitation/selection process underway
- Project selection for FY00 Program expected early November



# TEST AND TRAINING CONFERENCE OBJECTIVES

- Sponsored By:
  - NDIA/NTSA
  - OSD
  - NAWCTSD
  - STRICOM
  - AFAMS
- Bring Partners Together
  - Testers and Trainers
  - Government, Industry, Academia
- Spread LFT&T Program Message
- ID LFT&T Opportunities/Strategies
- Share Lessons Learned



# INDUSTRY/GOVERNMENT SUPPORTING ORGANIZATIONS

- Aberdeen Test Center
- Air Force Agency for Modeling & Simulation
- Air Force Operational Test & Evaluation Command
- Air Force Research Lab
- Air Force Systems Command
- ANSTEC
- Applied Data Technology
- Applied Research Associates
- Arcata Associates
- Army Evaluation and Analysis Center
- Army Materiel Systems Analysis Activity
- Army Operational Test & Evaluation Command
- Army Research Lab
- Army Simulation, Training and Instrumentation Command
- Army Special Operations Command
- Army Test & Evaluation Command
- Army TSM Force XXI
- Analysis & Technology
- Biloon Associates
- Camber
- Caswell
- Chesapeake Synergy
- Coleman Research
- Creative Optics
- Cubic Defense Systems
- DESE Research
- Defense Modeling and Simulation Office
- Defense Systems Management College
- Dynamics Research
- Dynetics
- Electronic Warfare Associates
- Embassy of Australia
- Embassy of Canada
- Federal Aviation Administration
- Georgia Tech Research Institute
- Gray Hawk Systems
- GTE Government Systems
- Harris
- ICON Associates
- Institute for Defense Analysis
- Institute for Simulation and Training
- Interstate Electronics
- ITT Industries
- Johns Hopkins University
- JAWP
- Joint Technical Coordinating Group
- L-3 Communications
- Litton/PRC
- Lockheed Martin
- Logicon
- Mechanical Dynamics
- Metric Systems
- MTS Associates
- Naval Air Systems Command
- Naval Air Warfare Center
  - Aircraft Division
  - Training Systems Division
  - Weapons Division
- Naval Sea Systems Command
- Navy Clothing & Textile Research
- Northrop Grumman
- Secretary of Defense
  - Director, OT&E
  - DUSD (Readiness)
- Oak Ridge National Lab
- Royal Air Force, United Kingdom
- Sandia National Lab
- Skyward
- Science Applications International Corporation
- Southwest Research Institute
- SURVIAC
- Survive Engineering
- Sverdrup Technology
- Systems Research Group
- Tactics Unlimited
- Teledyne Brown
- TRW, S&ITG
- TEXCOM
- Terrain Experts
- U.S. Atlantic Fleet
- University of Texas at Austin
- Washington Institute of Technology
- WTRD/BDAR



# Testing & Training: A National Partnership

- 1st Annual Symposium & Exhibition
  - Orlando, 18-20 August 1998,
  - 270 attendees, 50/50 each community
  - Resulted in 4 Major Recommended Thrusts:
    - Develop Testing and Training master plan
    - Develop clearinghouse for Lessons Learned
    - Foster Partnerships among government agencies, industry, and academia
    - Initiate Internet-based discussion group between PMs, Testers, Trainers



# TRAINING and SIMULATION

In today's era of constrained resources and rapid technological change, this training challenge can be overcome with simulation based training devices. Available findings show that simulators are cost-effective for operator and maintainer training in settings from the initial schoolhouse to the operational unit: they train as well as using the actual equipment, and cost less to procure and use. This also applies to computer-based instruction as compared to conventional classroom training. In fact, the Defense Science Board concluded that, (1) computer-based, simulated scenarios offer the only practical and affordable means to improve the training of Service operational commanders, their staffs, and their subordinates; and (2) that battle simulation offers the only opportunity to practice the use of certain weapon systems, sensor, tactics, and techniques against a skilled adversary. Economic analysis supports using simulators as a good investment, an investment that provides a return-on-investment that can be amortized over several years.



# **Testing & Training is Critical to OT&E Mission**

- **Testing & Training is a critical aspect of OT&E's mission.**
- **Testing is not just about getting weapons that work, it's what happens in the field that matters.**
- **If your Testing and Training Program works, you could save millions from testing that the Service training and doctrine schools spend to figure out how the weapons really work when they are being delivered, not to mention the potential lives saved.**

- Mark Forman - Principle at IBM and former  
Professional Staff Member for the Senate Joint  
Economics Committee (July 30, 1999)



# **What Kinds of Testing & Training Opportunities Are There?**

- POLICY**
- CROSS-FUNCTIONAL SHORT  
TERM TRAINING**
- ASSETS (PEOPLE, EQUIPMENT,  
THREATS)**
- EVALUATE  
TACTICS/DOCTRINES**
- EVENTS & SCHEDULE  
KNOWLEDGE/INTEGRATION**
- DATA COLLECTION**
- SIMULATIONS**





# **UPCOMING CONFERENCES**

**The International Congress and  
Exhibition on Testing, Evaluation,  
and Acquisition:  
The Global Marketplace**

**16th Annual National Test and Evaluation  
Conference and Exhibition**

**February 27-March 2, 2000  
Hotel Vancouver  
Vancouver, British Columbia,  
Canada**

**For more information, contact  
Sam Campagna at NDIA:  
(703) 247-2544**



# **UPCOMING CONFERENCES**

## **National Live Fire Test and Evaluation Conference**

**(Classified)**

**May 8-12, 2000  
Austin, Texas**

**For more information, contact  
Dr. Jerry Davis,  
University of Texas, Austin  
(512) 232-4554**



# ICOTE

## **A NEW INDUSTRIAL COUNCIL HAS BEEN FORMED UNDER THE AUSPICES OF NDIA.**

- THE FIFTH NDIA INDUSTRIAL COMMITTEE
- INDUSTRIAL COUNCIL ON OPERATIONAL TEST AND EVALUATION
- FOSTER COMMUNICATION AND UNDERSTANDING BETWEEN INDUSTRY AND THE OT&E COMMUNITY
- INDUSTRIAL MEMBERSHIP DRAWN FROM NDIA CORPORATE INDUSTRIAL MEMBERS.
- NDIA DIRECTOR, MG PAUL GREENBURG
- CHAIRMAN, MR. LA ROY HAMMER, CEO, STEWART & STEVENSON
- CO-CHAIRMAN, HONORABLE PHILIP E. COYLE



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